

ADDITIONAL NOTES ON THE GENUS *LIPPIA*. XVI

Harold N. Moldenke

For a detailed explanation of the herbarium acronyms employed in this and all others in my series of papers in this journal since 1932 see *Phytologia Memoirs* 2: 463--469 (1980) with the following additions: Gz = University of Graz, Graz, Austria (GZU) and Ne = Northeast Louisiana University, Monroe, Louisiana.

*LIPPIA* Houst.

Additional synonymy: *Lippia* (L.) Kunth ex Meisn., Pl. Vasc. Gen. 2: 199. 1840.

Additional & emended bibliography: L., Syst. Nat., ed. 1, 26. 1740; Gled., Berl. 5: 130. 1749; L., Philos. Bot. 32, 155, 173, & 337. 1751; B. Juss., Hort. Trian. 1759; L., Syst. Nat., ed. 10. 2: 1119. 1759; L., Sp. Pl., ed. 2, imp. 1, 2: 883. 1763; Gled., Syst. 174. 1764; L., Gen. Pl., ed. 6, Ord. Nat. 1764; L., Syst. Nat., ed. 12 rev. ["13"], 423. 1767; J. A. Murr. in L., Syst. Veg., ed. 12, 480. 1774; Reichenb., Gen. 324. 1778; J. A. Murr. in L., Syst. Veg., ed. 14, 574. 1784; Medic., Phil. Bot. 1: 180. 1789; J. F. Gmel. in L., Syst. Nat., ed. 13, imp. 2, 1: 955. 1791; Poir. in Lam., Tabl. Encycl. Méth. Bot. [Illust. Gen.] 1: 59. 1791; Gis., Carl. Linn. Prael. Ord. Nat. 520. 1792; Pers. in L., Syst. Veg., ed. 15, 611. 1797; Willd. in L., Sp. Pl., ed. 4, 3: 319 & 356. 1800; Cram., Disp. 143. 1803; St.-Hil., Expos. 1: 250. 1805; Spreng., Anleit. 2 (1): 426. 1817; Poir. in Lam., Tabl. Encycl. Méth. Bot. 3: pl. 539, fig. 1 & 2. 1819; Steud., Nom. Bot. Phan., ed. 1, 111, 485--486, 873, & 898. 1821; Link, Enum. 2: 126. 1822; Poir., Dict. 27: 9. 1823; Poir. in Lam., Tabl. Encycl. Méth. Bot. 4: 55 & 91. 1823; Bartl., Ord. 180. 1830; Loud., Hort. Brit., ed. 1, 246 & 529. 1830; Schlecht. & Cham., Linnaea 6: 372. 1831; Spreng., Gen. Pl. 2: 417. 1831; Cham., Linnaea 7: 213--243, 253, & 375--379, pl. 7, fig. C & D. 1832; Loud., Hort. Brit., ed. 2, 246 & 529. 1832; G. Don in Loud., Hort. Brit., ed. 3, 246 & 529. 1839; G. Don in Sweet, Hort. Brit., ed. 3, 553. 1839; Meisn., Pl. Vasc. Gen. 2: 199. 1840; Endl., Ench. 312. 1841; Reichenb., Nom. 108. 1841; Brongn., Enum. Gen. 65. 1843; D. Dietr., Syn. Pl. 3: 596--600, 609, & 610. 1843; Hassk., Cat. Pl. Hort. Bot. Bogor. Cult. Alt. 134. 1844; A. L. Juss. in Orbigny, Dict. Univ. Hist. Nat. 13: 185. 1849; Ledeb., Ross. 3: 330. 1849; Wight, Icon. Pl. Ind. Orient. 4 (3): 11, pl. 1463. 1849; Miq., Fl. Ind. Bat. 2: 905. 1857; Miq., Fl. Ind. Bat. Suppl. 1: 244. 1860; Peters, Naturwiss. Reise Mossamb. 6 (1): Bot. 256. 1861; Turcz., Bull. Soc. Imp. Mosc. 36 (2): 200--205. 1863; Kurz, Rep. Veg. Andam. App. A: 45. 1870; Miers, Trans. Linn. Soc. Lond. Bot. 27: 103. 1871; Ulrich, Internat. Wörterb., ed. 1, 128. 1871; Pfeiffer, Nom. Bot. 2 (1): 132 (1874) and 2 (2): 1569, 1570, & 1647. 1874; Ulrich, Internat. Wörterb., ed. 2, 128. 1875; Griseb., Abhandl. K. Gesel. Wiss. Gött. 24: [Symb. Fl. Argent.] 278. 1879; Fern.-Villar in Blanco, Fl. Filip., ed. 3, 4: Nov. App. 157. 1880; Caruel in Parlatore, Fl. Ital. 6: 331--332. 1884; Balf. f.,

Trans. Roy. Soc. Edinb. 31: [Bot. Socotra] 232 & 427. 1888; Stahl, Estud. Fl. Puerto Rico, ed. 1, 3: 286, 291--292, & 356. 1888; R. A. Phil., Ann. Mus. Nac. Chile Bot. 1: [Cat. Praev. Pl. Itin. Tarap.] 59. 1891; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 149--152. 1894; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 557. 1894; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 382. 1897; Engl., Syllab. Pflanzenfam., ed. 2, 178 & 206 (1898) and ed. 3, 187 & 224. 1903; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 65, 250, & 507. 1903; J. C. Willis, Dict. Flow. Pl., ed. 2, 445 & 604. 1903; Engl., Syllab. Pflanzenfam., ed. 4, 189 & 229. 1904; Macloskie in W. B. Scott, Rep. Princeton Univ. Exped. Patag. 8 (2): 681 & 691--692. 1905; F. N. Williams, Bull. Herb. Boiss., ser. 2, 5: 430. 1905; Pobéguin, Mat. Méd. Guin. 339 & 341. 1906; Engl., Syllab. Pflanzenfam., ed. 5, 192 & 236. 1907; L., Sp. Pl., ed. 1, imp. 2 & 3, 2: 633. 1907; King & Gamble, Journ. Asiat. Soc. Beng. 74 (2 extra): 797--798. 1908; D. H. Scott in Solered., Syst. Anat. Dicot. [transl. Boodle & Fritsch] 2: 1020--1022. 1908; J. C. Willis, Dict. Flow. Pl., ed. 3, 458 & 621. 1908; Engl., Syllab. Pflanzenfam., ed. 6, 198 & 242. 1909; Reiche & Phil. in Reiche, Estud. Crit. Fl. Chile 5: 272, 280, 282, & 297--303. 1910; Speg., Mycet. Argent. 5: 329, 375, & 378. 1910; Woodr., Gard. Trop., ed. 6, imp. 8, 442. 1910; M. Kunz, Syst. Anat. Untersuch. Verb. 1--78. 1911; Gilg in Engl., Syllab. Pflanzenfam., ed. 7, 314 & 374. 1912; C. K. Schneid., Illustr. Handb. Laubholzk. 2: 590, 591, & 593, fig. 385a. 1911; Greenm., Field Mus. Publ. Bot. 2: 339--341. 1912; Sydow, Justs Bot. Jahresber. 39 (1): 377, 385, 406, & 409. 1912; Urb., Symb. Antil. 7: 353. 1912; Höck, Justs Bot. Jahresber. 39 (1): 1046. 1913; Wangerin, Justs Bot. Jahresber. 39 (1): 493, 502, & 848. 1913; Fedde & Schust., Justs Bot. Jahresber. 39 (2): 320 (1913) and 40 (2): 335. 1915; R. E. Fries, Wiss. Ergebni. Schwed. Rhodes.-Kongo Exped. Bot. 2 (2): 273. 1916; Nienburg, Justs Bot. Jahresber. 39 (2): 1051. 1916; Fedde, Justs Bot. Jahresber. 39 (2): 1430. 1917; Fedde & Schust., Justs Bot. Jahresber. 41: 387. 1918; H. Hallier, Meded. Rijks Herb. Leid. 37: 17 & 19--20. 1918; E. D. Merr., Sp. Blanc. 330. 1918; Gilg in Engl., Syllab. Pflanzenfam., ed. 8, 318 & 381. 1919; Sanzin, Anal. Soc. Cient. Argent. 88: 96--105. 1919; E. D. Merr., Bibl. Enum. Born. Pl. 511. 1921; Haines, Bot. Bihar Orissa, ed. 1, 4: 704--705. 1922; Gilg in Engl., Syllab. Pflanzenfam., ed. 9 & 10, 339 & 405. 1924; J. C. Willis, Dict. Flow. Pl., ed. 5, 388, 677, & 678. 1925; Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 599--603. 1927; Chiov., Fl. Somalia [1]: 49 & 274. 1929; Good & Exell, Journ. Bot. 68: Suppl. 2: 139--140. 1930; Hieron., Pl. Diafōr. 225. 1930; L., Sp. Pl., ed. 1, imp. 4, 2: 633. 1934; Kirtikar & Basu, Indian Med. Pl., ed. 2, imp. 1, 3: 1912 & 1915--1917, pl. 731. 1935; Bedevian, Illustr. Polyglot. Dict. 40, 365--366, & 610. 1936; Record & Hess, Timb. New World 544. 1943; Diels in Engl., Syllab. Pflanzenfam., ed. 11, 339 & 404. 1936; Stahl, Estud. Fl. Puerto Rico, ed. 2, 3: 286, 291--292, & 356. 1937; Fletcher, Kew Bull. Misc. Inf. 1938: 406, 408, & [410]. 1938; Meeuse, Blumea 5: 66--68 & 79. 1942; González & Lombardo, Anot. Fitoter. Vern. Urug. 9. 1946; Jacks. in Hook. f. &

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270--272. 1978; Fournet, Fl. Illust. Phan. Guad. Mart. 1391 & 1397--1399. 1978; Heathcote in Haywood, Flow. Pl. World 237. 1978; Lindquist, Hickenia 1: 152--155. 1978; Mold., Phytologia 41: 131--135 & 145--151. 1978; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 30, 41, 43, 44, 47, 50, 51, & 53. 1978; C. E. Phillips, Wildfl. Del. East. Shore 203, pl. 37. 1978; Robin, Guillot, Ferry, & Collombel, Pl. Med. Phytother. 12: 134. 1978; Rogerson, Becker, & Prince, Bull. Torrey Bot. Club 105: 335. 1978; R. F. Sm., Act. Bot. Venez. 13: 193, 206, & 263, fig. 152. 1978; Steyermark & Huber, Fl. Avila 861, 862, & 868. 1978; Swanson & Sohmer, Proc. Iowa Acad. Sci. 85: 54. 1978; Sykes, N. Zeal. Journ. Bot. 16: 394. 1978; Anon., Biol. Abstr. 68: 3939 & 4594; Anon., Biores. Ind. 17 (5): ref. 42621 & 46314. 1979; D. E. Clark, Sunset New West. Gard. Book, ed. 4, imp. 2, 353 & 406. 1979; Fosberg, Sachet, & Oliver, Micronesica 15: 236. 1979; Hocking, Excerpt. Bot. A. 33: 86--88 & 91. 1979; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 217, 218, & 276. 1979; Jones & Luchsinger, Pl. Systemat. 301 & 302. 1979; Lindquist, Biol. Abstr. 68: 4597. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 16 & 27. 1979; Milz & Rimpler, Zeitschr. Naturforsch. Wissb. 34C: 324 & 325. 1979; Mold., Biol. Abstr. 67: 708. 1979; Mold., Phytologia 41: 508 (1979), 42: 199 & 508 (1979), 43: 294--295, 330, 506, & 512 (1979), and 44: 124, 125, 136, 138, 328, 384, 509, & 512. 1979; Noamesi, Biol. Abstr. 67: 6243. 1979; Pursh, Fl. Amer. Sept., imp. 2 [ed Ewan], 403. 1979; Rizzini, Trat. Fitogeog. Bras. 2: 292, 293, 302, 314, & 341. 1979; Rogerson, Becker, & Prince, Bull. Torrey Bot. Club 106: 62 & 154. 1979; Scoggan, Fl. Canada 4: 1295. 1979; Tans & Iltis, Trans. Wisc. Acad. Sci. 67: 92. 1979; Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 266, 271--281, 285, 286, & 288, fig. 129--132. 1979; Strausbaugh & Core, Fl. W. Va., ed. 3 ["2"], 788 & 789. 1979; Woodward & Rickett, Comm. Wild Fls. 214. 1979; Avery & Loope, S. Fla. Res. Cent. Rep. T-574: 33. 1980; Craig & Sm., Soil Crop Sci. Soc. Fla. Proc. 39: 85. 1980; Fosberg, Otobed, Sachet, Oliver, Powell, & Canfield, Vasc. Pl. Palau 38. 1980; Mold., Phytologia 45: 36--37, 40, 339, 352, & 507 (1980), 46: 173--175, 177, 179, & 508 (1980), and 47: 88. 1980; Mold., Phytol. Mem. 2: 5, 20, 49, 54, 64, 65, 69, 72, 74, 76--79, 81, 84, 90, 92, 94, 95, 97, 98, 101, 102, 104, 105, 109, 116, 122, 124, 126, 129, 130, 134, 147--149, 174, 175, 177, 178, 180, 183, 188, 189, 198, 200--208, 210, 211, 213--217, 220, 222--224, 227, 229, 231, 233, 234, 236, 238, 239, 241, 243, 244, 246, 263, 337, 357, 368, 372, 376, 397, 405, 409, 414--417, 419--423, 449, 452, 462, 463, & 628. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190--191. 1980; Polunin, Fls. Greece Balk. 387. 1980; Root, Herbs Spices Pirs. Flav. 34, 35, 58, 110, & 111, fig. 55. 1980; Wiggins, Fl. Baja Calif. 526 & 529--530. 1980; Duncan & Kortesz, Vasc. Fl. Ga. 111. 1981; Hu, Enum. Chin. Mat. Med. 219. 1981; Mold., Phytologia 47: 508. 1981; W. T. W. Morgan, Econ. Bot. 35: 124. 1981.

It is perhaps worth noting here that Caruel (1884) is among those botanists who correctly accredit the name *Lippia* to Houston. The *Zappania* Scop., listed as a synonym of *Lippia* by Spach (1840), actually is a synonym of *Phyla* Lour.

Although the Baileys (1976) definitely state that the true genus *Lippia* is not cultivated in the United States and Canada, *L. alba* (Mill.) N. E. Br. actually does occur in cultivation at least in Maryland and Pennsylvania.

Pobéguin (1906) describes an unidentified species of *Lippia* from the Republic of Guinea, based on *Bambaya* 26, as a "Plante très commune, 1 m. à 1 m. 50 de haut; fleurs blanches en glomérules par 4 à 1'aisselle des feuilles; feuilles verticillées vert clair, odorantes; existe en plusieurs variétés à odeurs différentes. Les indigènes se servent des feuilles en infusion." It is probable that he is here referring to *L. abyssinica* (Otto & Dietr.) Cuf., *L. chevalieri* Mold., *L. multiflora* Mold., and/or *L. rugosa* A. Chev., all known from that country and all quite similar in appearance.

Lindquist (1978) records the fungus, *Prospodium tumefaciens* Lindq., as parasitizing the leaves of an unidentified species of *Lippia* in Córdoba, Argentina.

The Dressler 2304 and Eichenwald s.n. [May 2, 1954], distributed as *Lippia*, actually are *Lantana achyranthifolia* Desf., while Shepherd, Semir, Andrade, & Salgado 7244 is *L. aristata* (Schau.) Briq., Mori & Santos 11848 is *Lantana canescens* H.B.K., Matuda & al. 31225 is *L. frutilla* Mold., W. Hoehne 5583 is *Lantana fucata* Lindl., Enriquez 676 is *L. involucrata* L., Tharp & York 51-135 & 51-142 are *L. macropoda* Torr., Fournier 143 is *L. peduncularis* Anderss., Dorantes & al. 1435 is *L. velutina* f. *albifructa* Mold., Barkley, Paxson, & Webster 2571 is *L. velutina* f. *violacea* Mold., and Chavelas, González, & Pérez 2236 and Héringer & al. 564 are not verbenaceous.

#### *LIPPIA ABYSSINICA* (Otto & Dietr.) Cuf.

Additional bibliography: D. Dietr., Syn. Pl. 3: 609. 1843; R. E. Fries, Wiss. Ergebn. Schwed. Rhodes.-Kong. Exped. Bot. 2 (2): 273. 1916; Good & Exell, Journ. Bot. 68: Suppl. 2: 139. 1930; H. N. & A. L. Mold., Pl. Life 2: 80 & 81. 1948; Dithens, Afric. Handb. 8: [Drug Pl. Afr.] 94. 1949; Mold., Biol. Abstr. 65: 6768 (1978) and 66: 1277. 1978; Mold., Phytologia 39: 434. 1978; Hocking, Excerpt. Bot. A.33: 86 & 88. 1979; Mold., Phytol. Mem. 2: 200, 202, 203, 205--208, 210, 211, 213, 217, 220, 223, 224, 227, 231, 233, 357, 419, & 558. 1980.

Dithens (1949) reports that this plant is used medicinally to treat fevers, colds, and colic in Africa. Fries (1916) cites his no. 1887 from Kasindi.

#### *LIPPIA ABYSSINICA* var. *PUBESCENS* (Mold.) Mold.

Additional bibliography: Mold., Biol. Abstr. 65: 6768 (1978) and 66: 1277. 1978; Mold., Phytologia 38: 385. 1978; Hocking, Excerpt. Bot. A.33: 86 & 87. 1979; Mold., Phytol. Mem. 2: 203, 224, & 558. 1980.

#### *LIPPIA ACUMINATA* C. Wright

Emended synonymy: *Lippia acuminata* "Ur. ex Griseb." apud A-

lain in León & Alain, Fl. Cuba, imp. 1, 4: 289. 1957.

Additional & emended bibliography: Alain in Leon & Alain, Fl. Cuba, imp. 1, 4: 288--289. 1957; Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 385. 1978; Mold., Phytol. Mem. 2: 90 & 558. 1980.

*LIPPIA ACUTIDENS* Mart. & Schau.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 385. 1978; Mold., Phytol. Mem. 2: 147 & 558. 1980.

Recent collectors describe this species as erect and xylopodiferous, with rose-colored corollas, and have found it growing in sandy soil on campo cerrado, at 800--950 m. altitude, flowering in July.

Additional citations: BRAZIL: Goiás: Hatschbach & Guimaraes 42274 (Ld), 42324 (Ld).

*LIPPIA ADPRESSA* Hayek

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 385--386. 1978; Mold., Phytol. Mem. 2: 147 & 558. 1980.

*LIPPIA AFFINIS* Schau.

Additional bibliography: Mold., Phytologia 38: 386 (1978) and 40: 67. 1978; Mold., Phytol. Mem. 2: 147, 174, & 558. 1980.

*LIPPIA ALBA* (Mill.) N. E. Br.

Additional & emended bibliography: Poir. in Lam., Tabl. Encycl. Méth. Bot. [Illust. Gen.] 1: 58. 1791; D. Dietr., Syn. Pl. 3: 596, 597, 609, & 610. 1843; Stahl, Estud. Fl. Puerto Rico, ed. 1, 3: 292. 1888; Reiche & Phil. in Reiche, Estud. Crit. Fl. Chile 5: 298 & 301--302. 1910; Sanzin, Anal. Soc. Cient. Argent. 88: 102, 103, & 133. 1919; Haines, Bot. Bihar Orissa, ed. 1, 4: 7-5 & 7-6. 1922; Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 599--602. 1927; Hieron., Pl. Diafor. 225. 1930; Stahl, Estud. Fl. Puerto Rico, ed. 2, 3: 292. 1937; González & Lombardo, Anot. Fitoter. Vern. Urug. 9. 1946; Alain in León & Alain, Fl. Cuba, imp. 1, 4: 288--289, fig. 124. 1957; Fester & al., Anal. Asoc. Quím. Argent. 45: 185--189. 1957; Haines, Bot. Bihar Orissa, ed. 2, 2: 739 & 740. 1961; Fournet, Fl. Illust. Phan. Guad. Mart. 1397--1399. 1978; Mold., Phytologia 41: 131--133. 1978; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 40 & 53. 1978; Hocking, Excerpt. Bot. A.33: 87 & 91. 1979; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 217. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 27. 1979; Troncoso in Burkart, Fl. Ilustr. Entre Ríos 5: 272--275, fig. 129. 1979; Mold., Phytol. Mem. 2: 23, 49, 64, 72, 74, 76, 77, 79, 81, 84, 90, 92, 94, 95, 97, 98, 101, 10-, 104, 105, 109, 116, 122, 124, 126, 129, 134, 147, 174, 177, 180, 188, 263, 337, 357, 414, 419, 420, 423, 558, & 628. 1980; Wiggins, Fl. Baja Calif. 529 & 530. 1980.

Additional illustrations: Alain in León & Alain, Fl. Cuba, imp.

l, 4: 288, fig. 124. 1957; Troncoso in Burkart. Fl. Ilustr. Entre Ríos 274, fig. 129. 1979.

Recent collectors describe this plant as a low spreading shrub, 1--1.5 m. tall, with green bracts, and have encountered it in forests and woody pastizal, at 200--800 m. altitude, in anthesis in July and August. The corollas are said to have been "pink" on Hart 1215, "reddish" on Austin & al. 7381, and "purple" on Stevens 9440.

Knuth (1927) cites from Venezuela the following collections: Bermudez: Humboldt & Bonpland s.n. Bolívar: Humboldt & Bonpland s.n. Federal District: Pittier 6172 & 7029. Margarita Island: Johnston 81, Miller & Johnston 125. He records the vernacular name, "cariquito blanco". Other authors have listed "herva cidreira", "romerillo", "salvia", "salvia de campo", "salvia de monte", "salvia morada", "salvia trepadora", "sauge de la Barbade", "sauge du Brésil", "thé de Chine", and "yerba buena".

Troncoso (1979) cites from Entre Ríos, Argentina: Baez 147, Boelcke 1248, Burkart 8792, 12899, 21363, 21364, 21365, 22291, & 23095, Correa & Bacigalupo s.n., Lorentz s.n., Meyer 10888, and Nicora 3282, some of these collections actually being from Almirón, Curuzú, Espinillo, and Lechiguana islands. She comments that "Existen ejemplares de esta especie más gráciles, de hojas más angostas y oblongas, de 2--3 (—5,5) cm long. x 1--2,3 cm lat., cabezuelas más pequeñas y pubescencia en general más breve y laxa. [This is the true *L. alba* --H.N.M.]. Estas diferencias permitirían considerarlos como una variedad de *L. alba*, pero la presencia de algunos ejemplares intermedios impide, por el momento, establecer una verdadera delimitación.....*Lippia alba* es muy empleada en la farmacopea popular. Diversos autores señalan su acción estimulante y antiespasmódica.....Especie, además, muy rica en aceites esenciales. Fester....y colab.....señalan la presencia de lippiona y piperitona, prevaleciendo una u otra de estas esencias en distintas muestras procedentes en Entre Ríos. Según estos autores, podría tener valor industrial el cultivo de *Lippia alba* para la producción de piperitona, materia prima para el mentol artificial."

The *L. alba* described by Wiggins (1980) from Baja California actually is var. *carterae* Mold.

Material of *Lippia alba* is often misidentified and distributed as *Lantana* sp. On the other hand, the Cantu 83, distributed as *Lippia alba*, actually is *L. graveolens* H.B.K., while Fosberg & Nasir 56922 is *Lantana indica* var. *albiflora* Wight and Ortiz 1780 is *Lantana microcephala* A. Rich.

Additional citations: TEXAS: Hidalgo Co.: Lawson & al. 483 (Ne-71512); Thomas, Marx, & Allen 39449 (Ne--92562). NICARAGUA: Matagalpa: W. D. Stevens 9440 (Ld). ECUADOR: Morona-Santiago: J. Hart 1215 (E--2600513). BRAZIL: Amapá: Austin, Nauman, Rabelo, Rosário, & Santos 7381 (Ld). BOLIVIA: El Beni: Feljanty 13 (Z).

#### *LIPPIA ALBA* var. *CARTERAE* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 401. 1978; Mold., Phytol. Mem. 2: 64 & 558.

1980; Wiggins, Fl. Baja Calif. 530. 1980.

Wiggins (1980) erroneously lists this taxon as typical *Lippia alba*, which is lavender-flowered.

*LIPPIA ALBA* var. *GLOBIFLORA* (L'Hér.) Mold.

Emended synonymy: *Lippia geminata* Humb. & Bonpl. apud Steud., Nom. Bot. Phan., ed. 1, 486. 1821.

Additional bibliography: Steud., Nom. Bot. Phan., ed. 1, 486 (1821) and ed. 2, 2: 54 & 750. 1841; D. Dietr., Syn. Pl. 3: 597 & 610. 1843; Griseb., Abhandl. K. Gesell. Wiss. Götting. 24: [Symb. Fl. Argent.] 278. 1879; Herzog, Meded. Rijks Herb. Leid. 29: 41. 1916; Mold., Phytologia 41: 132--133. 1978; Hocking, Excerpt. Bot. A.33: 87. 1979; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 217. 1979; Lopez-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytol. Mem. 2: 64, 116, 124, 126, 129, 134, 147, 174, 177, 180, 188, 357, 416. 419, 420, 449, 452, 462, 463, & 558. 1980.

Kummrow reports that this plant is used medicinally in Brazil. The corollas are said to have been "lilac" in color on Kummrow 1259 when fresh.

Additional citations: BRAZIL: Goiás: Hatschbach 34570 (W--2839472). CULTIVATED: Brazil: Kummrow 1259 (Ld.).

*LIPPIA ALNIFOLIA* Schau.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 474. 1978; Mold., Phytol. Mem. 2: 147 & 558. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Recent collectors describe this species as a bushy shrub, 1.5--2.5 m. tall, the leaves coriaceous, aromatic, rugose, dark glossy-green above, gray-green beneath, the bracts pale-green, the corollas "pale-pink with yellow-orange throat", and have found it growing among rocks in a region of sandstone, metamorphic, and quartzite rock outcrops associated with marsh and damp flushes and on campo rupestre, at 1000--1500 m. altitude, flowering in March and July, and fruiting in July. On Mori & al. 12420 the corollas are said to have been light-lilac "com uma mancha de amarela no centro".

Additional citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19763 (N, Z); Mori, King, Santos, & Hage 12420 (Ld, W--2854268), 12613 (Ld, W--2854281).

*LIPPIA AMERICANA* L.

Additional bibliography: Poir. in Lam., Tabl. Encycl. Méth. Bot. 3: pl. 539, fig. 1 & 2 (1819) and 4: 55 & 91. 1823; Pfeiffer, Nom. Bot. 2 (1): 134. 1874; Mold., Phytologia 41: 133. 1978; R. F. Sm., Act. Bot. Venez. 13: 193, 206, & 263, fig. 152. 1978; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Troncoso in Burkart, Fl. Ilustr. Entre Ríos 5: 271. 1979; Mold., Phytol. Mem. 2: 64, 84, 109, 129, 130, 134, 420, & 558. 1980.

Additional & emended illustrations: Poir. in Lam., Tabl. Encycl. Méth. Bot. 3: pl. 539, fig. 1 & 2; R. F. Sm., Act. Bot. Vén-

ez. 263, fig. 152. 1978.

Recent collectors have encountered this plant in forests and in "very disturbed areas", at 50--150 m. altitudes, flowering in October and November, and describe it as a shrub, 2 m. tall. The corollas are said to have been "white" on Kirkbride 2466 & 2634. Smith (1978) describes the species as follows: "Hoja rugosa con denticulos en su mitad distal. Pecíolo y tallos jóvenes pubescentes de olor fuerte. Casi siempre con cabezuelas de flores. Tallo cuadrangular en corte transversal. Arbusto secundario de zona cálida." It should be pointed out that on p. 193 of his work the figure illustrating this species is incorrectly given as "151".

Additional citations: COLOMBIA: Magdalena: Kirkbride 2466 (N, W--2834901), 2634 (W--2835021).

*LIPPIA AMERICANA* f. *HYPTOIDES* (Benth.) Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 475 & 476. 1978; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytol. Mem. 2: 109, 129, 130, 134, & 558. 1980.

*LIPPIA AMERICANA* f. *PILOSA* Mold.

Additional bibliography: Record & Hess, Timb. New World 544. 1943; Mold., Phytologia 41: 133. 1978; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytol. Mem. 2: 84, 109, 116, 129, & 558. 1980.

Recent collectors describe this plant as shrubby, with elongated spreading stems, the leaves aromatic, dull-green above, paler beneath, and the bracts pale-green, and have encountered it at 500 m. altitude, flowering in December. The corollas are said to have been "white" on Steyermark & Espinoza 108760.

Additional citations: VENEZUELA: Lara: Steyermark & Espinoza 108760 (N). Zulia: Aristeguieta 2058 (W--2882048).

*LIPPIA ANGUSTIFOLIA* Cham.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 477--478 (1978) and 39: 166. 1978; Mold., Phytol. Mem. 2: 147, 177, 188, & 558. 1980.

Recent collectors have found this plant growing in quebrachal, flowering and fruiting in December. The corollas are said to have been "bright-yellow" on Schinini 19612.

Additional citations: PARAGUAY: Schinini 19612 (N).

*LIPPIA ANTAICA* Loes. & Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 478. 1978; Mold., Phytol. Mem. 2: 134 & 558. 1980.

*LIPPIA ARBOREA* Rojas

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 478. 1978; Mold., Phytol. Mem. 2: 198 & 558. 1980.

*LIPPIA ARECHAVALETAE* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 39: 435. 1978; Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 272 & 278--280, fig. 132. 1979; Mold., Phytol. Mem. 2: 147, 177, 180. 188, & 558. 1980.

Illustrations: Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 279, fig. 132. 1979.

Hatschbach describes this plant as xylopodiferous, with yellow "flowers" [corollas], and encountered it on campo limpo, flowering in September.

Troncoso (1979) cites the following collections from Entre Ríos, Argentina, noting that the flowers are definitely diclinous: Burkart 21882, 21884, 22697, 22698, 23099, & 26356, Cabrera 10797, Herb. Inst. Darwinian 25669, Hunziker 4531, Lorentz 356 & s.n., and Ragone & Guaglianone s.n.

Additional citations: BRAZIL: Paraná: Hatschbach 37924 (Eu--37821).

*LIPPIA ARECHAVALETAE* var. *MICROPHYLLA* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 479. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA ASPERRIMA* Cham.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 39: 435 (1978) and 40: 78. 1978; Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 272 & 275--278, fig. 130 1--x. 1979; Mold., Phytologia 47: 88. 1980; Mold., Phytol. Mem. 2: 147, 175, 177, 180, 188, & 559. 1980.

Illustrations: Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 276, fig. 130 1--x. 1979.

Recent collectors have encountered this plant growing on high campo, flowering in September. The corollas are described as having been "intense yellow" on Schinini & Bordas 13335.

Troncoso (1979) asserts that this species is definitely diclinous in regard to its flowers and that it "Habita en lugares humedos, campos virgenes o bordes de selva en galeria". She cites the following collections from Entre Ríos, Argentina: Burkart 1084, 22704, 24013, 24228, 26350, 28068, & 30281 and Hauman s.n.

The Morel 4353 and Pedersen 9650, previously cited by me as the typical form of this species, are now regarded as representing f. *angustifolia* Mold.

Additional citations: PARAGUAY: Schinini & Bordas 13335 (N).

*LIPPIA ASPERRIMA* f. *ANGUSTIFOLIA* Mold., Phytologia 47: 88. 1980.

Bibliography: Mold., Phytologia 47: 88. 1980; Mold., Phytol. Mem. 2: 188. 1980.

This narrow-leaved form has been found growing in dry sandy grasslands, flowering in January and February, fruiting in February. The material cited below was previously erroneously regarded by me and cited as typical *L. asperrima* Cham.

Citations: ARGENTINA: Corrientes: Pedersen 9650 (W--2883187). For-

mosa: Morel 4353 (N--type).

*LIPPIA ASPERRIMA* var. *LONGIPEDUNCULATA* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 480. 1978; Mold., Phytol. Mem. 2: 177, 180, 188, & 559. 1980.

*LIPPIA ASPERRIMA* var. *ROTUNDATA* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 479 & 480. 1978; Mold., Phytol. Mem. 2: 147, 188, & 559. 1980.

*LIPPIA BAHIENSIS* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 39: 435. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Recent collectors describe this plant as a slender subshrub or shrublet, 20--45 cm. tall, the leaves aromatic or slightly so, dark-green or grayish-green above, paler beneath, plicate, the bracts green, and have found it growing in grassland in an area of dry grassland on quartzite and white sand, apparently subject to flooding, with red lateritic soils in the valleys with cerrado, as well as in "caatinga on sand and with quartzitic rocks and metamorphosed sandstones forming rock areas with more open vegetation including an extensive area of Vellozia", at 1000 m. altitude, flowering in February and March. The corollas are said to have been "lilac, throat yellow with white surrounding" on Harley 18934 and "pink with darker pink tube, yellow in throat" on Harley 20053.

Additional citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 18934 (N, Z), 20053 (K).

*LIPPIA BALANSAE* Briq.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 480--481. 1978; Mold., Phytol. Mem. 2: 147, 177, & 559. 1980.

Hatschbach describes this plant as a shrub, 1.3 m. tall, with lilac flowers, and found it growing in cerrado, flowering and fruiting in October.

Additional citations: BRAZIL: Mato Grosso: Hatschbach 38696 (W--2850788). Paraná: Hatschbach 12952 (Eu--662).

*LIPPIA BAUMII* Gürke

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 481. 1978; Mold., Phytol. Mem. 2: 227, 231, 233, 243, & 559. 1980.

*LIPPIA BELLATULA* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 481. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Harley and his associates describe this plant as a subshrub, 1 m. tall, with many straight branches spreading from the base, the leaves dull-green and aromatic, the corollas "pink with a yellow throat", and have encountered it among sandstone rocks on dry hillsides with scrubby vegetation, at 1200 m. altitude, flowering in March.

Additional citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19943 (Id, N).

*LIPPIA BOCAINENSIS* Glaz.

Additional bibliography: Fedde & Schust., Justs Bot. Jahresser. 39 (2): 320. 1913; Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 481--482. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA BOLIVIANA* Rusby

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 482 (1978) and 42: 199. 1979; Mold., Phytol. Mem. 2: 134, 147, 175, 188, & 559. 1980.

Recent collectors describe this plant as 1--1.6 m. tall, and have found it growing at 2480--2590 m. altitude, flowering in March and October. The corollas are said to have been "white" on Beck 882 and Jiménez 185.

Additional citations: BOLIVIA: Cochabamba: S. G. Beck 882 (Id); A. M. Jiménez 185 (Id).

*LIPPIA BOLIVIANA* var. *ANGUSTA* Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 482. 1978; Mold., Phytol. Mem. 2: 175 & 559. 1980.

*LIPPIA BOLIVIANA* var. *INTEGRIFOLIA* Mold., Phytologia 42: 199. 1979.

Bibliography: Mold., Phytologia 42: 199. 1979; Mold., Phytol. Mem. 2: 175 & 559. 1980.

Citations: BOLIVIA: Cochabamba: A. M. Jimenez 188 (Z--type).

*LIPPIA BOTHRIOURA* Briq.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 482. 1978; Mold., Phytol. Mem. 2: 177, 180, & 559. 1980.

*LIPPIA BRACTEATA* Carr.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 38: 482. 1978; Mold., Phytol. Mem. 2: 357 & 559. 1980.

*LIPPIA BRACTEOSA* (Mart. & Gal.) Mold.

Additional bibliography: Mold., Biol. Abstr. 66: 1277. 1978; Mold., Phytologia 39: 435. 1978; Hocking, Excerpt. Bot. A.33: 87. 1979; Mold., Phytol. Mem. 2: 64 & 559. 1980.

*LIPPIA BRADEANA* Mold.

Additional bibliography: Mold., Biol. Abstr. 61: 4884. 1976; Mold., Phytologia 39: 24, 39, & 40. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA BRADEANA* var. *VELUTINA* Mold.

Additional bibliography: Mold., Biol. Abstr. 61: 4884. 1976; Mold., Phytologia 39: 24 & 40. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA BRADEI* Mold.

Additional bibliography: Mold., Phytologia 39: 24. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

Recent collectors describe this plant as a subshrub, to 50 cm. tall, "solo ramoso", with purple corollas. They have encountered it at the base of a morro, at 1050 m. altitude, flowering in July.

Additional citations: BRAZIL: Bahia: Hatschbach & Guimaraes 42383 (Z).

*LIPPIA BROMLEYANA* Mold., Phytologia 43: 294--295. 1979.

Bibliography: Mold., Phytologia 43: 294--295. 1979; Mold., Phytol. Mem. 2: 147 & 559. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19226 (Ld--isotype, N--type, Ub--holotype, Z--isotype).

*LIPPIA BURTONII* J. G. Baker

Additional bibliography: Mold., Phytologia 39: 25 & 395. 1978; Mold., Phytol. Mem. 2: 220, 227, 236, & 559. 1980.

*LIPPIA CAFFRA* Sond.

Additional bibliography: Mold., Phytologia 39: 25. 1978; Mold., Phytol. Mem. 2: 246 & 559. 1980.

*LIPPIA CALLENSI* Mold.

Additional bibliography: Mold., Phytologia 39: 25. 1978; Mold., Phytol. Mem. 2: 220 & 559. 1980.

*LIPPIA CALLENSI* var. *VILLOSA* Mold.

Additional bibliography: Mold., Phytologia 39: 25. 1978; Mold., Phytol. Mem. 2: 217, 220, & 559. 1980.

*LIPPIA CALICARPAEFOLIA* H.B.K.

Emended synonymy: *Lippia callicarpaefolia* Humb. & Bonpl. apud Steud., Nom. Bot. Phan., ed. 1, 485. 1821.

Additional bibliography: Steud., Nom. Bot. Phan., ed. 1, 485 (1821) and ed. 2, 2: 54. 1841; Imbesi, Ind. Piante 450. 1964; Mold., Phytologia 39: 435 & 442 (1978) and 40: 69 & 81. 1978; Mold., Phytol. Mem. 2: 64, 72, 357, 419, & 559. 1980.

The vernacular name, "nacca", is reported for this plant. Material of *L. callicarpaefolia* has been misidentified and distrib-

uted in some herbaria as *Lagasca* sp.

Additional citations: GUATEMALA: Amatitlan: Kellerman 6372 (Me--117222).

*LIPPIA CAMPESTRIS* Mold.

Additional bibliography: Mold., Phytologia 39: 28. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA CANDICANS* Hayek

Additional bibliography: Mold., Phytologia 39: 28. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA CARDIOSTEGIA* Benth.

Additional bibliography: Mold., Phytologia 39: 435 (1978) and 40: 69. 1978; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 40. 1978; Mold., Phytol. Mem. 2: 64, 72, 76, 77, 79, 81, 84, & 559. 1980.

Recent collectors have found this plant growing in cultivated areas on hillsides, in low deciduous forests on broken lava, among loose volcanic cinders of ridgetops, along roadsides, on steep slopes partially covered by disturbed forest, and in areas dominated by grasses and dense shrubs to 1 m. tall, describing it as a common shrub, 1--2.5 m. tall. They have encountered it at 375--1330 m. altitude, flowering in November, and in fruit in July and November. The corollas are said to have been "white with a yellow center" on Stevens 3919 & 4507.

Additional citations: GUATEMALA: Santa Rosa: Dunn, Dziekanowski, & Pennell 23016 (N). NICARAGUA: Granada: F. B. Nelson 7510 (Au). Managua: W. D. Stevens 3919 (Z), 4507 (Ld), 5277 (Ld).

*LIPPIA CARVIODORA* Meikle

Additional bibliography: Mold., Phytologia 39: 30--31. 1978; Mold., Phytol. Mem. 2: 231 & 559. 1980; W. T. W. Morgan, Econ. Bot. 35: 124. 1981.

Morgan (1981) cites Mathew 6510 and records the vernacular name, "esrilipong", from Kenya for this species.

*LIPPIA CARVIODORA* var. *MINOR* Meikle

Additional bibliography: Mold., Phytologia 39: 31. 1978; Mold., Phytol. Mem. 2: 204, 231, & 559. 1980

*LIPPIA CENTAUREA* A. Chev.

Additional bibliography: Mold., Phytologia 39: 31. 1978; Mold., Phytol. Mem. 2: 217 & 559. 1980.

*LIPPIA CHEVALIERII* Mold.

Additional bibliography: Mold., Phytologia 39: 31--32, 181, & 456. 1978; Mold., Phytol. Mem. 2: 200, 205--208, 213, & 559. 1980.

*LIPPIA CHIAPASENSIS* Loes.

Additional bibliography: Mold., Phytologia 41: 133--134. 1978; Mold., Phytol. Mem. 2: 64, 72, & 559. 1980.

Recent collectors have found this plant in flower in December.  
Additional citations: MEXICO: Chiapas: *Miranda* 5824 (Me--71052).

*LIPPIA CHRYSANTHA* Greenm.

Additional bibliography: Mold., *Phytologia* 39: 33. 1978; Mold., *Phytol. Mem.* 2: 64 & 559. 1980.

Recent collectors have found this plant in anthesis in January.

The Lundell & Lundell 12507, distributed as and previously cited by me as *L. chrysantha*, actually is *L. oaxacana* Robinson & Greenm.

Additional citations: MEXICO: Chiapas: *Miranda* 5982 (Me--71815), 5995 (Me--71811).

*LIPPIA CIPOËNSIS* Mold.

Additional bibliography: Mold., *Phytologia* 39: 33. 1978; Mold., *Phytol. Mem.* 2: 147 & 559. 1980.

*LIPPIA CONTERMINA* Briq.

Additional bibliography: Griseb.. Abhandl. K. Gesell. Wiss. Göt. 24: [Symb. Fl. Argent.] 277. 1879; Mold., *Phytologia* 39: 33. 1978; Mold., *Phytol. Mem.* 2: 178, 188, & 559. 1980.

Grisebach (1879) says for his *L. turnerifolia* var. *camporum*: "Huc referenda videtur *Lantana brasiliensis* Lk. ex Ic. Schauer in Fl. bras. IX. t. 43., *Sarcolippia* Cham., ab auctore ipso *Lippiis* adnumerata, sed nostra suffrutescens, non fruticosa".

*LIPPIA CONTROVERSA* Mold.

Additional bibliography: Mold., *Phytologia* 39: 436 (1978) and 40: 82. 1978; Mold., *Phytol. Mem.* 2: 64, 72, 76, 79, 81, & 559. 1980.

Recent collectors describe this plant as an open-crowned aromatic shrub or shrub-like tree, 1.2-3 m. tall, the foliage with a lemon scent, and have found it growing in drainage ditches in pastures, along roadsides, in weedy fields and roadside ditches, in tropical dry forests, in "areas of open lava flows and closed forest", and in highly mixed tropical forests dominated by pine and oak on mountain slopes with clay soils volcanically derived, as well as scattered in short-tree forests with dense undergrowth, at 40-3100 m. altitude, in flower from May to July and September, in fruit in May and June. Neil refers to it as an "uncommon shrub", while Stevens found it to be "common on floodplains". The corollas are said to have been "yellow" on Boutin & Brandt 2346 and Fryxell & Lott 3243, "at first white with a yellow center, later entirely white" on Stevens 3533, and "white with a yellow center" on Neill 4303 and Stevens 2885 & 3018.

Additional citations: MEXICO: Chiapas: Fryxell & Lott 3243 (Z). Jalisco: Boutin & Brandt 2346 (Me--214975). Nayarit: Gentry & Gilly 10484 (Me--48955). Oaxaca: *Miranda* 4705 (Me--71051). NICARAGUA: Managua: Neill 2296 (Ld); W. D. Stevens 2885 (Ld), 3533 (Ld). Masaya: Neill 4303 (Ld). Nuevo Segovia: W. D. Stevens 3018 (Ld).

*LIPPIA CONTROVERSA* var. *BREVIPEDUNCULATA* Mold.

Additional bibliography: Mold., Phytologia 39: 34. 1978; Mold., Phytol. Mem. 2: 64, 79, & 559. 1980.

Recent collectors describe this plant as an abundant aromatic shrub, 2--3 m. tall, and have found it to be "common near crater rim" and in gallery forests and dense secondary growth on level plains, at 80--100 m. altitude. The corollas are said to have been "white" on Stevens 3370.

Additional citations: NICARAGUA: Managua: W. D. Stevens 3370 (Ld), 3409 (Ld).

*LIPPIA CORIACEA* Briq.

Additional bibliography: Mold., Phytologia 39: 34. 1978; Mold., Phytol. Mem. 2: 178 & 559. 1980.

*LIPPIA CORYMBOSA* Cham.

Additional bibliography: Mold., Phytologia 39: 436. 1978; Mold., Phytol. Mem. 2: 147, 419, & 559. 1980.

Recent collectors describe this species as a subshrub, growing from woody underground parts, to 60 cm. tall, with purple bracts, and have encountered it as "rare" in the drier places on flat sandy ledges among boulders, on rocky hillsides and steep slopes, at 1600 m. altitude, flowering in February. The flowers are described as "corolla-tube purple with a white center" on Gates & Estabrook 138.

Additional citations: BRAZIL: Goiás: Gates & Estabrook 138 (N). Minas Gerais: Irwin, Fonseca, Souza, Reis dos Santos, & Ramos 27508 (N).

*LIPPIA COSTARICENSIS* Mold.

Additional synonymy: *Lippia costariensis* Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 40, sphalm. 1978.

Additional bibliography: Mold., Phytologia 41: 134. 1978; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 40. 1978; Mold., Phytol. Mem. 2: 81, 84, 419, & 559. 1980.

*LIPPIA CULMENICOLA* Mold.

Additional bibliography: Mold., Phytologia 39: 36. 1978; Mold., Phytol. Mem. 2: 64 & 559. 1980.

Miranda has found this plant in anthesis in December.

Additional citations: MEXICO: Puebla: Miranda 2527 (Me---69656).

*LIPPIA CURTISIANA* Mold.

Additional bibliography: Mold., Phytologia 41: 134 & 147. 1978; Mold., Phytol. Mem. 2: 64, 72, & 559. 1980.

*LIPPIA DAUENSIS* (Chiiov.) Chiiov.

Additional bibliography: Fedde & Schust., Justs Bot. Jahressber. 41: 387. 1918; Mold., Phytologia 39: 36--37. 1978; Mold., Phytol. Mem. 2: 203, 204, 231, 420, & 559. 1980.

Ash describes this plant as a bushy herb, to 3 feet tall, with dark-green leaves, and found it to be colonizing areas of dried

red mud-flats around ponds, at 1480 m. altitude, along with *Acacia nilotica* and *Chrysanthellum americanum* in the fringing layer. The corollas are said to have been "white" on Ash 2813.

Additional citations: ETHIOPIA: Ash 2813 (W--2819810).

*LIPPIA DIAMANTINENSIS* Glaz.

Additional bibliography: Fedde & Schust., Justs Bot. Jahresber. 39 (2): 320. 1913; Mold., Phytologia 39: 37. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA DOMINGENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 37. 1978; Mold., Phytol. Mem. 2: 95 & 559. 1980.

*LIPPIA DUARTEI* Mold.

Additional bibliography: Mold., Phytologia 39: 37. 1978; Mold., Phytol. Mem. 2: 147 & 559. 1980.

*LIPPIA DUMETORUM* Herzog

Additional bibliography: Mold., Phytologia 39: 37--38 & 264. 1978; Mold., Phytol. Mem. 2: 175 & 559. 1980.

Recent collectors describe this species as a very fragrant shrub, 2 m. tall, and have encountered it at 170 m. altitude, flowering in April. The corollas are said to have been "white" on Krapovickas & Schinini 36286.

Additional citations: BOLIVIA: Santa Cruz: Krapovickas & Schinini 36286 (Z).

*LIPPIA DURANGENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 38. 1978; Mold., Phytol. Mem. 2: 64 & 559. 1980.

*LIPPIA EKMANT* Mold.

Additional bibliography: Mold., Phytologia 39: 38--39. 1978; Mold., Phytol. Mem. 2: 147, 188, & 559. 1980.

*LIPPIA ELEGANS* Cham.

Synonymy: *Lippia elegans* Cham. ex Mold., Phytol. Mem. 2: 420, in syn. 1980.

Additional bibliography: Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 602. 1927; Mold., Phytologia 39: 436 (1978) and 40: 65. 1978; Mold., Phytol. Mem. 2: 147, 420, & 559. 1980.

Recent collectors refer to this plant as a very common fragrant shrub, 0.8--1.5 m. tall, found on campo and in caatinga, at 500 m. altitude, flowering and fruiting in March. The corollas are described as having been "white, center of tube yellow" on Mori & al. 9532, and "white" on Hatschbach 42096 & Krapovickas & Cristóbal 35376.

Material of *L. elegans* has been misidentified and distributed in some herbaria as *Lantana* sp.

Additional citations: BRAZIL: Bahia: Hatschbach 42096 (N); Mori,

*Mattos Silva, Santos, Kallunki, & Pennington* 9532 (Ld, N). Mato Grosso: *Hatschbach* 34152 (W--2839445). Minas Gerais: *Irwin, Fonseca, Souza, Reis dos Santos, & Ramos* 27193 (N); *Krapovickas & Cristóbal* 35376 (Z).

*LIPPIA ELEGANS* var. *OBTUSIFOLIA* Mold.

Additional bibliography: Mold., *Phytologia* 39: 39. 1978; Mold., *Phytol. Mem.* 2: 147 & 559. 1980.

*LIPPIA ELLIPTICA* Schau..

Additional bibliography: Mold., *Phytologia* 39: 436. 1978; Mold., *Phytol. Mem.* 2: 147 & 559. 1980; Mold. & Bromley in Harley & Mayo, *Toward Checklist Fl. Bahia* 190. 1980.

*LIPPIA ELLIPTICA* var. *SILVICOLA* Mold.

Additional bibliography: Mold., *Phytologia* 39: 436. 1978; Mold., *Phytol. Mem.* 2: 147 & 559. 1980; Mold. & Bromley in Harley & Mayo, *Toward Checklist Fl. Bahia* 190. 1980.

Recent collectors describe this plant as a shrub, 2 m. tall, the corollas "yellow in the center", and found it growing in the transition zone between mata de cipó and caatinga much disturbed by domestic animals, flowering in April.

Additional citations: BRAZIL: Bahia: *Mori, Mattos Silva, Kallunki, & Santos* 9994 (Ld, N).

*LIPPIA EUPATORIUM* Schau..

Additional bibliography: Mold., *Phytologia* 39: 24, 37, & 39--41. 1978; Mold., *Biol. Abstr.* 67: 708. 1979; Mold., *Phytol. Mem.* 2: 147 & 559. 1980.

Hatschbach describes this plant as erect, with yellow flowers [corollas], and encountered it on rocky campo, flowering in May.

Additional citations: BRAZIL: Distrito Federal: *Hatschbach* 36696 (Eu--34807).

*LIPPIA EUPATORIUM* var. *ANGUSTIFOLIA* Mold.

Synonymy: *Lippia eupatorium* var. *angustifolium* Mold., *Phytol. Mem.* 2: 559, sphalm. 1980.

Additional bibliography: Mold., *Phytologia* 39: 40--41. 1978; Mold., *Phytol. Mem.* 2: 147 & 559. 1980.

*LIPPIA FELIPPEI* Mold.

Additional bibliography: Mold., *Phytologia* 39: 41. 1978; Mold., *Phytol. Mem.* 2: 147 & 560. 1980.

*LIPPIA FERRUGINEA* H.B.K.

Emended synonymy: *Lippia ferruginea* Humb. & Bonpl. apud Steud., *Nom. Bot. Phan.*, ed. 1, 485. 1821.

Additional bibliography: Steud., *Nom. Bot. Phan.*, ed. 1, 485 (1821) and ed. 2, 2: 54. 1841; Mold., *Phytologia* 39: 41 & 167. 1978; Mold., *Phytol. Mem.* 2: 134 & 560. 1980.

*LIPPIA FILIFOLIA* Mart. & Schau.

Additional bibliography: Mold., Phytologia 39: 41--42. 1978; Mold., Phytol. Mem. 2: 147 & 560. 1980.

*LIPPIA FLAVIDA* Urb.

Additional bibliography: Fedde & Schust., Justs Bot. Jahresber. 40 (2): 335. 1915; Mold., Phytologia 39: 42. 1978; Mold., Phytol. Mem. 2: 95 & 560. 1980.

*LIPPIA FLORIDA* Cham.

Additional bibliography: Mold., Phytologia 39: 42 & 444. 1978; Mold., Phytol. Mem. 2: 147 & 560. 1980.

*LIPPIA FORMOSA* T. S. Brandeg.

Additional bibliography: Mold., Phytologia 39: 42--43. 1978; Mold., Phytol. Mem. 2: 64 & 560. 1980; Wiggins, Fl. Baja Calif. 33 & 530. 1980.

*LIPPIA FRAGRANS* Turcz.

Additional & emended bibliography: D. H. Scott in Solered., Syst. Anat. Dicot. [transl. Boodle & Fritsch] 2: 1020 & 1021. 1908; Reiche & Phil. in Reiche, Estud. Crit. Fl. Chile 5: 298 & 299. 1910; Mold., Phytologia 39: 43. 1978; Mold., Phytol. Mem. 2: 183 & 560. 1980.

Reiche & Philippi (1910) describe this species as "Planta perenne, algo leñosa en la base, mui clorosa por las muchas glandulas que la cubren. Tallos estriados, ramosos. Hojas opuestas, enteras, oblongas, atenuadas en la base, jeneralmente agudas; de 1--2,5 cm. de largo, sus bordes provistos de pelos blancos. Inflorescencia paniculada, compuesta de glomérulos subglobosos. Brácteas anchamente ovoides, en la cara esterior i en los bordes ligeramente peludas; las inferiores de 3--4 mm. Cálix bipartido, ligeramente peludo, de 3,5--4 mm.. Corola blanca; su tubo  $\neq$  del largo de cálix; el limbo marcadamente cígonorfo por la estension mayor de uno de los 5 lóbulos obtusos. Estambres 4, didinamos, con las anteras casi sésiles; las de insercion superior cada una con un apéndice largo del conectivo. Estigma oblicuo, dilatado. El ovario fácilmente se deshace en 2 porciones con un óvulo en cada una. Fruto desconocido. Tallos hasta 0,6 m. -- Planta mui característica de la sección Zapania. Provincia de Atacama (Bandurrias)."

*LIPPIA FRANCENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 43, 80, & 170. 1978; Mold., Phytol. Mem. 2: 147, 420, & 560. 1980.

*LIPPIA GARDNERIANA* Schau.

Additional bibliography: Mold., Phytologia 39: 35, 43--44, 164. & 440. 1978; Mold., Phytol. Mem. 2: 147 & 560. 1980.

*LIPPIA GEHRTII* Mold.

Additional bibliography: Mold., Phytologia 39: 44. 1978; Mold.,

Phytol. Mem. 2: 147, 420, & 560. 1980.

*LIPPIA GENTRYI* Standl.

Additional bibliography: Mold., Phytologia 39: 44--45 & 442. 1978; Mold., Phytol. Mem. 2: 64 & 560. 1980.

*LIPPIA GLANDULOSA* Schau.

Additional bibliography: Mold., Phytologia 41: 134 & 151. 1978; Mold., Phytol. Mem. 2: 147 & 560. 1980.

Recent collectors refer to this plant as a shrub, 0.6--2 m. tall, and found it growing in caatinga and on granite cliffs, at 300--900 m. altitude, flowering and fruiting from February to April. The corollas are said to have been "white" on Mori 13431 and Mori & al. 9960. Rosa & Cordeiro comment: "Inflorescencia seca, cheiro ativo agradavel".

Material of this species has been misidentified and distributed in some herbaria as *Hyptis goyazensis*.

Additional citations: BRAZIL: Bahia: Döbereiner-Tokarnia 1449 (Ld); Mori 13431 (N, Z); Mori, Mattos Silva, Kallunki, & Santos 9960 (N, Z). Roraima: Rosa & Cordeiro 1507 (N).

*LIPPIA GLAZIOVIANA* Loes.

Additional bibliography: Fedde & Schust., Justs Bot. Jahresber. 39 (2): 320. 1913; Mold., Phytologia 39: 45--46 & 445. 1978; Mold., Phytol. Mem. 2: 147 & 560. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Recent collectors describe this plant as a woody shrub to 40 cm. tall and report it to be "common" in sandy soil of rocky campo among boulders, at 1600 m. altitude, in flower in February. Gates & Estabrook describe the corollas on their no. 102 as "corolla-tube purple with white hairs outside and in throat, center of tube yellow with white ring at color change from purple, becoming darker purple with orange throat in age".

Additional citations: BRAZIL: Goiás: Gates & Estabrook 102 (N).

*LIPPIA GOSSWEILLERI* S. Moore

Additional & emended bibliography: Good & Exell, Journ. Bot. 68: Suppl. 2: 139. 1930; Mold., Phytologia 39: 46. 1978; Mold., Phytol. Mem. 2: 233 & 560. 1980.

*LIPPIA GRACILIS* Schau. in A. DC., Prodr. 11: 576--577. 1847 [not *L. gracilis* R. A. Phil., 1896].

Additional bibliography: Mold., Phytologia 39: 45, 46, 78, 179, & 438. 1978; Hocking, Excerpt. Bot. A.33: 87. 1979; Mold., Phytol. Mem. 2: 147, 357, & 560. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

Recent collectors describe this plant as a dense aromatic shrub, 1.5--1.8 m. tall, and have found it growing in caatinga, flowering in January, April, and May, and fruit in January. The corollas are said to have been "white" on Cavalcante & Silva 2629 and Matos 8474.

The homonymous *L. gracilis* R. A. Phil. is a synonym of *Acantholippia trifida* var. *reichei* Mold.

Material of *L. gracilis* Schau. has been misidentified and distributed in some herbaria as *Hyptis suaveolens* Poir.

Additional citations: BRAZIL: Ceará: Matos 8474 (N). Espírito Santo: W. Hoehne 5549 (W--2860001). Pará: Cavalcante & Silva 2629 (N); Rosa & Santos 1885 (N).

**LIPPIA GRANDIFLORA** Mart. & Schau.

Additional bibliography: Mold., Phytologia 39: 78--80, 165, & 440. 1978; Mold., Phytol. Mem. 2: 148, 405, & 560. 1980.

**LIPPIA GRANDIFOLIA** Hochst.

Additional bibliography: Mold., Phytologia 39: 80--81. 1978; Mold., Phytol. Mem. 2: 201, 203, 220, 222, 224, 231, 420, & 560. 1980.

**LIPPIA GRANDIFOLIA** var. *ANGUSTISPICATA* Mold.

Additional bibliography: Mold., Phytologia 39: 81. 1978; Mold., Phytol. Mem. 2: 220 & 560. 1980.

**LIPPIA GRANDIFOLIA** var. *LONGIPEDUNCULATA* Mold.

Additional bibliography: Mold.. Phytologia 39: 81. 1978; Mold., Phytol. Mem. 2: 220, 224, & 560. 1980.

**LIPPIA GRATA** Schau.

Additional bibliography: Mold., Phytologia 39: 81--82 & 455. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Mori describes this plant as a shrub, 3 m. tall, the corollas "white, with a yellow spot in the center". He encountered it in caatinga, at 350 m. altitude, flowering in March.

Additional citations: BRAZIL: Bahia: Mori 13447 (N, Z).

**LIPPIA GRAVEOLENS** H.B.K.

Additional & emended synonymy: *Lippia graveolens* Humb. & Bonpl. apud Steud., Nom. Bot. Phan., ed. 1, 486. 1821. *Lippia berlandii* Brouk, Pl. Consum. Man, 316, sphalm. 1975. *Lippia graviolens* H.B.K., in herb.

Additional bibliography: Steud., Nom. Bot. Phan., ed. 1, 486 (1821) and ed. 2, 2: 54. 1841; D. Dietr., Syn. Pl. 3: 599. 1841; Imbesi, Ind. Piante 450. 1964; Brouk, Pl. Consum. Man. 316 & 470. 1975; Terrell, U. S. Dept. Agr. Agric. Handb. 505: 71 & 166. 1977; Mold., Phytologia 41: 134. 1978; Mold., Phytol. Mem. 2: 49, 54, 64, 69, 72, 76, 79, 81, 357, 409, 416, 419, & 560. 1980.

Recent collectors refer to this species as a shrub, 0.5--3 m. tall, growing from a woody rootstock, the leaves aromatic, and have found it to be "frequent in matorral of *Prosopis glandulosa* and *Acacia rigidula*", among boulders on cliffs, in sandy-clay soil, in matorral with woody shrubs and *Hechtia glomerata*, in woods of *Acacia*, *Quercus*, *Garrya*, *Juniperus*, etc., on limestone hills, on steep slopes with *Quercus*, *Juniperus*, *Bursera*, *Ipomoea* and *Helio-carpus*, and "scattered with *Prosopis*, *Larrea*, *Viguiera stenoloba*,

and *Fouquiera*", at 52--2200 m. altitude, in anthesis in March, August, September, and November. They report the vernacular name, "oregano cimarrón".

Pennell and his associates encountered the plant "on steep hillslopes with much caliche outcrop, very alkaline, with arid scrub, giant barrel cacti and euphorbs of many genera". Cochrane and his associates describe it as "frequent twiggy shrubs to 10.5 dm. tall, several-stemmed at base, soon branching, the whole plant aromatic, flowers fragrant, corolla white with a small yellow eye; cytological material collected" but apparently distributed as *Lantana velutina* Mart. & Gal. by misidentification. They encountered the plant "on low gravelly hills and river valley, in grazed desert to open crassicaulis matorral dominated by *Cephalocereus hoppenstedtii* and spiny mimosoid legumes, with *Yucca vernalis*, *Beaucarnea gracilis*, *Actinocheita filicina*, *Juliana adstringens*, *Jatropha neopauciflora*, *Malpighia galeottiana*, and *Echinopteris lappula*", at 1600 m. altitude, flowering in July.

The corollas are said to have been "white" on Breedlove 35907, Crutchfield 1108 & 1143, and Webster, Miller, & Miller 12909, "cream-white" on Correll 31565, and "very pale-yellow" on Smith & Corona Mex. 36.

Terrell (1977) asserts that the "oregano" of commerce comes only in part from *Lippia graveolens* and in part from *Origanum vulgare* L.

Material of *Lippia graveolens* has been misidentified and distributed in some herbaria as "*Alloysia gratissima* (Gill. & Hook.) Troncoso", *Lantana velutina* Mart. & Gal., and even as *Turnera diffusa* Willd. On the other hand, the Medrano 10260, distributed as *Lippia graveolens*, actually is *Lantana microcephala* A. Rich.

Additional citations: TEXAS: Brewster Co.: D. S. Correll 31565 (N). Cameron Co.: Cantu 83 (Ne--94040); Crutchfield 1108 (N). Hidalgo Co.: Barrera s.n. [13 June 1979] (Ne--173704). Starr Co.: Crutchfield 1143 (N). MEXICO: Chiapas: Webster, Miller, & Miller 12909 (Me--133595). Coahuila: Butterwick, Smith, & Whalen 582 (Au). Guerrero: Breedlove 35990 (N). Morelos: Miranda 1621 (Me--73558); Vázquez 3949 (Me--168847). Nuevo León: Socorro Gonzalez s.n. (Au). Oaxaca: Breedlove 35907 (N); Miranda 4739 (Me--71050). Puebla: Cochrane, Cochrane, & al. 8506 (Ld); Pennell, Dunn, & Dziekanowski 192 (N). San Luis Potosí: Marioquin s.n. [4-III-61] (Me--73523). Veracruz: Smith & Corona Mex. 36 (Me--99384).

#### *LIPPIA GRISEA* Mold.

Additional bibliography: Mold., Phytologia 39: 88--89. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

#### *LIPPIA GRISEBACHIANA* Mold.

Additional & emended bibliography: Sanzin, Anal. Soc. Cient. Argent. 88: 98, 100, 102, 103, & 133, fig. 5. 1919; Mold., Phytologia 39: 89 (1978) and 40: 76. 1978; Mold., Phytol. Mem. 2: 188 & 560. 1980.

Emended illustrations: Sanzin, Anal. Soc. Cient. Argent. 88: 103, fig. 5. 1919.

*LIPPIA HARLEYI* Mold.

Additional bibliography: Mold., Phytologia 39: 436--437. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980; Mold. & Promley in Harley & Mayo, Toward Checklist Fl. Bahia 190. 1980.

*LIPPIA HASSLERIANA* Chod.

Additional bibliography: Mold., Phytologia 39: 89. 1978; Mold., Phytol. Mem. 2: 148, 178, & 560. 1980.

Pedersen found this plant growing in rough grassland, flowering in December. The corollas are said to have been "white" on his no. 9520.

Additional citations: PARAGUAY: Pedersen 9520 (W--2883249).

*LIPPIA HATSCHBACHII* Mold.

Additional bibliography: Mold., Phytologia 41: 134. 1978; Mold., Phytol. Mem. 2: 148, 420, & 560. 1980.

*LIPPIA HEDERAFFOLIA* Mart. & Schau.

Additional bibliography: Mold., Phytologia 41: 134--135. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Additional citations: BRAZIL: Minas Gerais: Hatschbach 41418 (W--2840080); Irwin, Fonsêca, Souza, Reis dos Santos, & Ramos 27267 (N), 28442 (N).

*LIPPIA HERBACEA* Mart.

Additional bibliography: Mold., Phytologia 39: 90. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Recent collectors describe this plant as an herb, 1 m. tall, viscous near the inflorescence, the phyllaries violet, and the flower-heads pale-lavender, and have found it growing on rocky campo and in low woods, at 1000 m. altitude.

Additional citations: BRAZIL: Goiás: Irwin, Reis dos Santos, Souza, & Fonsêca 24455 (N). Minas Gerais: Hatschbach & Ramamoorthy 38008 (W--2839397).

*LIPPIA HIERACIFOLIA* Cham.

Additional bibliography: Mold., Phytologia 39: 90--91. 1978; Mold., Phytol. Mem. 2: 148, 180, 188, & 560. 1980.

*LIPPIA HIRSUTA* L. f.

Additional bibliography: Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 602. 1927; Mold., Phytologia 41: 135. 1978; Steyermark & Huber, Fl. Avila 862 & 868. 1978; Hocking, Excerpt. Bot. A.33: 91. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytol. Mem. 2: 109, 422, & 560. 1980.

Knuth (1927) cites Hartweg 1354 as from Venezuela even though its accompanying label is inscribed "Columbia", Venezuela having been a part of Colombia then. He lists the vernacular name, "amogre".

*LIPPIA HIRSUTA* var. *MORITZII* (Turcz.) López-Palacios

Additional & emended bibliography: Knuth, Feddes Repert. Spec.

Nov. Beih. 43: [Init. Fl. Venez.] 602 & 603. 1927; H. N. & A. L. Mold., Pl. Life 2: 51, 73, & 81. 1948; Mold., Phytologia 41: 135. 1978; Steyerm. & Huber, Fl. Avila 862 & 868. 1978; Hocking, Excerpt. Bot. A.33: 91. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytol. Mem. 2: 109, 116, 419--422, & 560. 1980.

Recent collectors describe this plant as a treelet, 4--5 m. tall, with a globose crown, the flowers attracting a large number of insects. They have found it in flower in August. The corollas are said to have been "cream" color on *Aristeguieta* 3350.

Knuth (1927) cites Wagener 426 from Federal District and Moritz 1640 from Miranda, Venezuela.

Additional citations: VENEZUELA: Mérida: *Bernardi* s.n. [10 Mayo 1956] (N). Trujillo: *Aristeguieta* 3350 (W--2882578).

*LIPPIA HIRTA* (Cham.) Meisn.

Additional bibliography: Mold., Phytologia 39: 95--96. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Hatschbach notes that this plant grows from a xylopodium, is to 70 cm. tall, and encountered it on dry campo, flowering in February. The corollas on his no. 41449 are said to have been "lilac" in color when fresh.

Additional citations: BRAZIL: Paraná: Hatschbach 41449 (ld).

*LIPPIA HISPIDA* Good in Good & Exell, Journ. Bot. 68: Suppl. 2: 139--140. 1930.

Additional & emended bibliography: Good & Exell, Journ. Bot. 68: Suppl. 2: 139--140. 1930; Mold., Phytologia 39: 96. 1978; Mold., Phytol. Mem. 2: 233, 246, & 560. 1980.

Recent collectors have encountered this plant at 800--1000 m. altitude, in both anthesis and fruit in December. Material has been misidentified and distributed in some herbaria as *L. javanica* (Burm. f.) Spreng.

Additional citations: SOUTH AFRICA: Transvaal: Dahlstrand 181 (Go), 1299 (Go).

*LIPPIA HOEHNEI* Mold.

Additional bibliography: Mold., Phytologia 41: 145. 1979; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Additional citations: BRAZIL: Mato Grosso: (W--2839442).

*LIPPIA HOEHNEI* var. *GOYAZENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 97. 1978; Mold., Phytol. Mem. 2: 148. 1980.

*LIPPIA INDICA* Mold.

Additional bibliography: Mold., Phytologia 40: 200--201. 1978; Hocking, Excerpt. Bot. A.33: 88. 1979; Mold., Phytol. Mem. 2: 263, 419, 422, & 560. 1980.

*LIPPIA INOPINATA* Mold.

Additional bibliography: Mold., *Phytologia* 39: 97. 1978; Mold., *Phytol. Mem.* 2: 64 & 560. 1980.

Recent collectors have encountered this plant in pastizal chaparral, flowering and fruiting in November, also in anthesis in December.

Additional citations: MEXICO: Aguascalientes: Meza, Soto, & León 493 (Me--119426). Chiapas: Miranda 9123 (Me--71816).

*LIPPIA INSIGNIS* Mold.

Additional bibliography: Mold., *Phytologia* 39: 97. 1978; Mold., *Phytol. Mem.* 2: 148 & 560. 1980; Mold. & Bromley in Harley & Mayo, *Toward Checklist Fl. Bahia* 191. 1980.

Harley and his associates describe this species as a slender, aromatic subshrub, 1 m. tall, the stems brittle, little-branched, the leaves rather rigid, scabrid, glossy, dark-green above, gray-green beneath, the corolla "bright-pink, whitish in [the] throat," and have encountered it among sandstone rocks with open sand in the flatter areas and with open scrub in exposed sites to scattered woodland, at 1000 m. altitude, flowering and fruiting in March.

Additional citations: BRAZIL: Bahia: Harley, Mayo, Storr, Santos, & Pinheiro in Harley 19360

*LIPPIA INTEGRIFOLIA* (Griseb.) Hieron.

Additional bibliography: Griseb., *Abhandl. K. Gesell. Wiss. Gött.* 24: [Symb. Fl. Argent.] 278. 1879; Mold., *Phytologia* 39: 98 (1987) and 40: 76. 1978; Mold., *Phytol. Mem.* 2: 189 & 560. 1980.

*LIPPIA INTERMEDIA* Cham.

Additional bibliography: Hocking, *Excerpt. Bot. A.*25: 379. 1975; Mold., *Phytologia* 39: 98--99. 1978; Troncoso in Burkart, *Fl. Ilustr. Entre Ríos* 5: 280. 1979; Mold., *Phytol. Mem.* 2: 148, 178, 189, & 560. 1980.

Hatschbach describes this plant as xylopodiferous, with yellow "flowers" [corollas], and found it growing in dry campo, flowering in September.

Troncoso (1979) avers that the *L. intermedia* Cham. of Grisebach (1879) is actually *L. arechavaletae* Mold. and that the true *L. intermedia* of Chamisso is limited to "Brasil meridional" and Paraguay.

Additional citations: BRAZIL: Paraná: Hatschbach 17091 (Eu--5476).

*LIPPIA INTERMEDIA* var. *PARVIFOLIA* Mold.

Additional bibliography: Hocking, *Excerpt. Bot. A.*25: 379. 1975; Mold., *Phytologia* 39: 99. 1978; Mold., *Phytol. Mem.* 2: 148 & 560. 1980.

*LIPPIA IODOPHYLLA* Schau.

Additional bibliography: Mold., *Phytologia* 39: 99. 1978; Mold.,

*Phytol. Mem.* 2: 148 & 560. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 191. 1980.

Harley and his associates describe this plant as a brittle-stemmed shrublet, to 75 cm. tall, the leaves bright-green, glossy above, pale beneath, slightly aromatic, the bracts pale-green, and the corollas "deep-lilac with [an] orange-yellow throat surrounded by white", and have found it growing by a small river in a flooded restinga forest, at sealevel, flowering in January.

Additional citations: BRAZIL: Bahia: *Harley, Mayo, Storr, Santos, & Pinheiro in Harley* 18239 (Id, N).

*LIPPIA JALISCANA* Mold.

Additional bibliography: Mold., *Phytologia* 39: 99. 1978; Mold., *Phytol. Mem.* 2: 64 & 560. 1980.

*LIPPIA JANGADENSIS* S. Moore

Additional bibliography: Mold., *Phytologia* 39: 99. 1978; Mold., *Phytol. Mem.* 2: 148 & 560. 1980.

*LIPPIA JANGADENSIS* var. *EITTENORUM* Mold.

Additional bibliography: Mold., *Phytologia* 39: 99. 1978; Mold., *Phytol. Mem.* 2: 148 & 560. 1980.

*LIPPIA JAVANICA* (Burm. f.) Spreng.

Additional & emended bibliography: Poir. in Lam., *Tabl. Encycl. Méth. Bot.* [Illustr. Gen.] 1: 59 & 60, pl. 17, fig. 2. 1791; Steud., *Nom. Bot. Phan.*, ed. 1, 111. 1821; D. Dietr., *Syn. Pl.* 3: 596, 599, & 609. 1843; Dithens, *Afric. Hændb.* 8: [Drug Pl. Afr.] 94. 1949; Mold., *Phytologia* 39: 437, 439, & 447 (1978) and 40: 60 & 80. 1978; Holm, Pancho, Herberger, & Plucknett, *Geogr. Atlas World Weeds* 217. 1979; Mold., *Phytol. Mem.* 2: 203, 220, 224, 227, 229, 231, 236, 238, 239, 241, 243, 244, 246, 357, 420, 452, & 560. 1980.

Recent collectors describe this plant as an aromatic spreading shrub, to 4 feet tall, and have found it growing in roadside scrub and in deep rich soil along streams, at 600 m. altitude. The corollas were "white" on Bayliss BS.8742.

Dithens (1949) reports this plant is used in Africa to treat colds, dysentery, and malaria.

The Dahlstrand 181 & 1299, distributed as *L. javanica*, actually are *L. hispida* Good, while Dahlstrand 442 & 1133 are *L. scaberrima* Send. and Dahlstrand 58 is *L. whytei* Mold.

Additional citations: SOUTH AFRICA: Cape Province: Bayliss BS. 8742 (N); Collector undetermined s.n. [Mo. Bot. Gard. photos A.865] (Go photo). Transvaal: Dahlstrand 182 (Go), 183 (Go), 688 (Go).

*LIPPIA JUNELLIANA* (Mold.) Troncoso

Additional bibliography: Mold., *Phytologia* 39: 106. 1978; Mold., *Phytol. Mem.* 2: 189 & 560. 1980.

*LIPPIA KITUIENSIS* Vatke

Additional bibliography: Mold., *Phytologia* 39: 106 (1978) and

40: 80. 1978; Hocking, Excerpt. Bot. A.33: 87. 1979; Mold., Phytol. Mem. 2: 220, 231, & 560. 1980.

*LIPPIA LACUNOSA* Mart. & Schau.

Additional bibliography: Hocking, Excerpt. Bot. A.33: 87. 1979; Mold., Phytologia 41: 145. 1979; Mold., Phytol. Mem. 2: 148, 357, & 560. 1980.

Hatschbach describes this plant as a few-branched shrub, 1 m. tall, the corollas "lilac" or "rose" in color, with the interior of the tube yellow, and has found it growing along sandy roadsides and "encosta rochosa de morro", at 1100 m. altitude, in anthesis in September, and in fruit in July.

Additional citations: BRAZIL: Minas Gerais: Hatschbach 27258 (Eu--18642), 41516 (Ld.).

*LIPPIA LACUNOSA* var. *ACUTIFOLIA* Mold.

Additional bibliography: Hocking, Excerpt. Bot. A.25: 378. 1975; Mold., Phytologia 39: 163. 1978; Mold., Phytol. Mem. 2: 148, 420, & 560. 1980.

*LIPPIA LANATA* Walp.

Additional bibliography: Mold., Phytologia 39: 163. 1978; Mold., Phytol. Mem. 2: 64 & 560. 1980.

*LIPPIA LANTANIFOLIA* F. Muell.

Additional bibliography: Mold., Phytologia 39: 163. 1978; Mold., Phytol. Mem. 2: 337 & 560. 1980.

*LIPPIA LASIOCALYCINA* Cham.

Additional bibliography: Mold., Phytologia 41: 145. 1979; Mold., Phytol. Mem. 2: 148, 175, 178, 416, 420, & 560. 1980.

Recent collectors describe this species as a shrub, 1 m. tall, growing in cerrado, and have found it in flower in September. The corollas are said to have been "purple" on Argent & al. 6486.

Additional citations: BRAZIL: Mato Grosso: Argent, Ramos, Richards, & Souza 6486(Co, N). Minas Gerais: Sellow s.n. [S. Antonio de Monte; Macbride photos 17522] (Z--photo of type).

*LIPPIA LASIOCALYCINA* var. *SAINTHILAIREI* Mold.

Additional bibliography: Mold., Phytologia 39: 164 & 394. 1978; Mold., Phytol. Mem. 2: 148 & 560. 1980.

Recent collectors describe this plant as a shrub, 3 m. tall, and have encountered it in caatinga, at 600 m. altitude, flowering in July. The corollas are said to have been "red" on Mori & al. 12264.

Additional citations: BRAZIL: Bahia: Mori, King, Santos, & Hage 12264 (W--2854260, Z).

*LIPPIA LASIOCALYX* Herzog

Additional bibliography: Mold., Phytologia 39: 164. 1978; Mold., Phytol. Mem. 2: 175 & 561. 1980.

*LIPPIA LAXIBRACTEATA* Herzog

Additional bibliography: Mold., Phytologia 39: 165. 1978; Mold., Phytol. Mem. 2: 148, 175, 189, & 561. 1980.

Recent collectors have found this plant in anthesis in April. The corollas are said to have been "white" on the collection cited below.

Additional citations: BOLIVIA: Santa Cruz: Krapovickas & Schinini 31316 (Z).

*LIPPIA LEPIDA* Mold.

Additional bibliography: Mold., Phytologia 39: 165. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

*LIPPIA LIBERIENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 165--166 & 266. 1978; Mold., Phytol. Mem. 2: 81 & 561. 1980.

*LIPPIA LINDMANII* Briq.

Additional bibliography: Mold., Phytologia 39: 437. 1978; Mold., Phytol. Mem. 2: 148, 175, 240, & 561. 1980.

*LIPPIA LINDMANII* f. *OPPOSITIFOLIA* Mold.

Additional bibliography: Mold., Phytologia 39: 437. 1978; Mold., Phytol. Mem. 2: 148, 240, & 561. 1980.

*LIPPIA LINEARIFOLIA* Mold.

Additional bibliography: Mold., Phytologia 39: 166. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980

*LIPPIA LONGEPEDUNCULATA* Kuntze

Additional bibliography: Mold., Phytologia 39: 166. 1978; Mold., Phytol. Mem. 2: 148, 178, & 561. 1980.

*LIPPIA LOPEZII* Mold.

Additional bibliography: Mold., Phytologia 39: 167. 1978; Mold., Phytol. Mem. 2: 134, 421, & 561. 1980.

*LIPPIA LORENTZII* Mold.

Additional bibliography: Mold., Phytologia 39: 167--168. 1978; Mold., Biol. Abstr. 67: 708. 1979; Mold., Phytol. Mem. 2: 148, 175, 178, 180, 189, 419, 420, & 561. 1980.

Recent collectors refer to this plant as a shrub, 2 m. tall, and have found it in anthesis in October. The corollas are said to have been "violet" in color on the collection cited below.

Additional citations: PARAGUAY: Schinini & Bordas 17892 (Z).

*LIPPIA LUCENS* Standl.

Additional bibliography: Mold., Phytologia 39: 168 & 266. 1978; Mold., Phytol. Mem. 2: 72, 76, & 561. 1980.

*LIPPIA LUPULIFORMIS* Mold.

Additional bibliography: Mold., Phytologia 39: 168. 1978; Mold., Phytol. Mem. 2: 227, 231, 233, 246, & 561. 1980.

*LIPPIA LUPULINA* Cham.

Additional synonymy: *Lippia lupilina* Cham. ex Mold., Phytol. Mem. 2: 421, in syn. 1980.

Additional & emended bibliography: Turcz., Bull. Soc. Nat. Mosc., 36 (2): 204 & 205. 1863; H. N. & A. L. Mold., Pl. Life 2: 53. 1948; Napp-Zinn, Anat. Blatt. A (1): 352 & 724. 1974; Mold., Phytologia 41: 145. 1979; Mold., Phytol. Mem. 2: 148, 175, 178, 189, 420, 421, & 561. 1980.

Recent collectors describe this species as an herb, growing from a xylopodium, the bracts "white, tinted purple", and have found it growing in clay or sandy soil of cerrado, campo cerrado, and campo queimado, flowering in June. The corollas are said to have been "purple" on Prance & al. 26275, "lilac" on Oliveira 66, "rose" on Oliveira 6 & 40, "yellow" on Vieira & al. 948, and "white, interior of corolla yellow" on Vieira & al. 951.

Material of *L. lupulina* has been misidentified and distributed in some herbaria as Malvaceae sp.

Additional citations: BRAZIL: Mato Grosso: Oliveira 6 (Ld), 40 (Ld), 66 (Ld); Prance & Schiller 26275 (N). Minas Gerais: Irwin, Fonseca, Souza, Reis dos Santos, & Ramos 27228 (N). Pará: Kirkbride & Lleras 2889 (N). Rondônia: Vieira, Petersen, Nelson, Ramos, & Mota 948 (Ld), 951 (Ld).

*LIPPIA LUPULINA* var. *ALBIFLORA* Troncoso

Additional bibliography: Mold., Phytologia 39: 171. 1978; Mold., Phytol. Mem. 2: 178 & 561. 1980.

Pedersen describes this plant as a subshrub, 0.3--0.7 m. tall, and found it growing in loose sandy soil of rough grassland.

Additional citations: PARAGUAY: Pedersen 9428 (W--2883280).

*LIPPIA LUPULINA* var. *PARAGUARIENSIS* Chod.

Additional bibliography: Mold., Phytologia 39: 171--172. 1978; Mold., Phytol. Mem. 2: 148, 178, & 561. 1980.

Recent collectors describe this plant as erect and have encountered it on campo, at 750 m. altitude, flowering in February. The corollas are said to have been "rose"-colored on Hatschbach & al. 35925. Heringer and his associates note that the "inflorescencias nas extremidades dos ramos flores agrupadas protegidas por brácteas rosea com falce amarela".

Additional citations: BRAZIL: Goias: Heringer, Paula, Mendonca, & Salles 2311 (N). Mato Grosso: Hatschbach, Anderson, Barneby, & Gates 35925 (Eu--33223).

*LIPPIA MACEDOI* Mold.

Additional bibliography: Mold., Phytologia 39: 172. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

*LIPPIA MARRUBIIFOLIA* Reichert

Additional bibliography: Mold., Phytologia 39: 172. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

*LIPPIA MARTIANA* Schau.

Additional bibliography: Mold., Phytologia 39: 172 & 263. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

*LIPPIA MARTIANA* f. *CAMPESTRIS* Mold., Phytologia 41: 346. 1979.

Bibliography: Mold., Phytologia 41: 346. 1979; Mold., Phytol. Mem. 2: 148 & 561. 1980.

Citations: BRAZIL: Distrito Federal: Tax. Class Univ. Bras. 518 (N--isotype, W--type).

*LIPPIA MATTOGROSSENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 172--173 & 261 (1978) and 40: 65. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

Recent collectors describe this species as a shrub, 2 m. tall, with fragrant leaves, and have encountered it in typical cerrado vegetation among sandstone rocks, flowering in May. The corollas are said to have been cream-color on the collection cited below.

Additional citations: BRAZIL: Mato Grosso: Rosa & Santos 1956 (N, N).

*LIPPIA MCVAUGHTI* Mold.

Additional bibliography: Mold., Phytologia 39: 173. 1978; Mold., Phytol. Mem. 2: 64, 421, & 561.

Itié found this plant in full anthesis and fruit in December.

Additional citations: MEXICO: Chiapas: Itié 3884 (Me--59311).

*LIPPIA MELASTOMIFOLIA* Gandoger

Additional bibliography: Mold., Phytologia 39: 173. 1978; Mold., Phytol. Mem. 2: 72 & 561. 1980.

*LIPPIA MICHOACANA* Mold.

Additional bibliography: Mold., Phytologia 39: 174. 1978; Mold., Phytol. Mem. 2: 64 & 561. 1980.

*LIPPIA MICROCEPHALA* Cham.

Additional bibliography: Mold., Phytologia 41: 145. 1979; Mold., Phytol. Mem. 2: 148, 421, & 561. 1980.

Additional citations: BRAZIL: Minas Gerais: Irwin, Fonsêca, Souza, Reis dos Santos, & Ramos 28309 (N).

*LIPPIA MICROMERA* Schau.

Additional & emended bibliography: Stahl, Estud. Fl. Puerto Rico, ed. 1, 3: 292. 1888; Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 602. 1927; Stahl, Estud. Fl. Puerto Rico, ed. 2, 3: 292. 1937; H. N. & A. L. Mold., Pl. Life 2: 63. 1948; Neal, In Gard. Hawaii, ed. 1, imp. 1, 637 & 638, fig. 244b (1948) and ed. 1, imp. 2, 637 & 638, fig. 244b. 1949; Alain in León & Alain, Fl. Cuba, imp. 1, 4: 288--289. 1957; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Neal, In Gard. Hawaii, ed. 2, 723 & 724, fig. 276b. 1965; Fournet, Fl. Illust. Phan. Guad. Mart. 1397 & 1399. 1978; Mold., Phytologia 41: 146. 1979; Steyermark & Huber, Fl.

Avila 861 & 868. 1978; Mold., Phytol. Mem. 2: 104, 105, 109, 116, 122, 357, & 561. 1980.

Additional & emended illustrations: Neal, In Gard. Hawaii, ed. 1, imp. 1, 637, fig. 244b (1948), ed. 1, imp. 2, 637, fig. 244b (1949), and ed. 2, 723, fig. 276b. 1965.

Recent collectors have found this ornamental plant in coastal thickets and on forested slopes, as well as among scrubby xerophytic vegetation, from sealevel to 220 m. altitude, describing it as a shrub, 3 m. tall, in full anthesis in February, September, and November. Others have referred to it as a shrub only to 40 cm. tall, the foliage fragrant when crushed. The corollas are said to have been "white" on Steyermark & al. 108065 & 120201 and "cream"-color on Aristeguieta 2117.

Knuth (1927) cites Moritz 402 from Bolívar, Venezuela, and Ernst s.n. from Margarita Island. He reduces *L. helleri* Britton to synonymy here, as well as *L. cuneifolia* Sessé & Moc., and this may, indeed, ultimately prove to be correct. Neal (1965) reports the common name, "false thyme", as applied to this plant in Hawaii.

Additional citations: VENEZUELA: Bolívar: Moritz 492 [Macbride photos 17526] (Z--photo of logotype). Sucre: Steyermark, Espinosa, & Manara 108065 (N), 108190 (N). Táchira: Aristeguieta 2117 (V--2882584); Steyermark, Liesner, & Gonzalez 120201 (E--2774722).

#### *LIPPIA MICROMERA* var. *HELLERI* (Britton) Mold.

Additional & emended bibliography: Stahl, Estud. Fl. Puerto Rico, ed. 1, 3: 292. 1888; Urb., Symb. Antill. 4: 532. 1911; Stahl, Estud. Fl. Puerto Rico, ed. 2, 3: 292. 1937; Alain in Leon & Alain, Fl. Cuba, imp. 1, 4: 288--289. 1957; Mold., Phytologia 39: 177--178. 1978; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 217. 1979; Mold., Phytol. Mem. 2: 79, 90, 95, 98, 357, 416, 417, & 561. 1980.

Jiménez describes this plant as a very common shrub, 1.5 m. tall, erect, and very aromatic, much eaten by wild goats, and found it growing at 200 m. altitude, flowering in May. He describes the corollas as "white".

Additional citations: HISPANIOLA: Dominican Republic: J. J. Jiménez 8834 (Ld, Me).

#### *LIPPIA MICROPHYLLA* Cham.

Additional synonymy: *Lippia michophylla* Rizzini, Trat. Fitogeog. Bras. 2: 302, sphalm. 1979.

Additional bibliography: Reiche & Phil. in Reiche, Estud. Crit. Fl. Chile 5: 301. 1910; Speg., Mycot. Argent. 5: 375. 1910; Sydow, Justs Bot. Jahrsber. 39 (1): 377. 1912; Fedde, Justs Bot. Jahrsber. 39 (2): 1430. 1917; Lewis & Elvin-Lewis, Med. Bot. 376. 1977; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 50. 1978; Mold., Phytologia 41: 146. 1979; Mold., Phytol. Mem. 2: 122, 148, 421, & 561. 1980; Mold. & Bromley in Harley & Mayo, Toward Checklist Fl. Bahia 191. 1980.

Lewis & Elvin-Lewis (1977), referring to this plant as *Lantana microphylla*, state that its fruit serves medicinally as a stimulant

and tonic in tropical America. Recent collectors describe it as a subshrub or undershrub, 1.5--2 m. tall, with a thick woody caudex, and leaves with a *Basilicum*-like fragrance, the bracts light green. They have found the plant growing on campo and in cerrado, at 1100 m. altitude, in anthesis in March and October. The corollas are said to have been "white" on Mori & al. 9696, "cream with [a] yellow stripe in the center" on Mori & Funch 13367, and with the "tube light-yellow, limb white" on Maas & Westra 2634.

Spegazzini (1910) records the fungus, *Camarosporulum andicola* Speg., as parasitic on *Lippia microphylla* in Argentina, but since *Lippia microphylla* Cham. does not occur in Argentina, it seems obvious that the plant to which he is referring is *Acantholippia deserticola* (R. A. Phil.) Mold., formerly known as *Lippia microphylla* F. Phil.

Material of *Lippia microphylla* has been distributed in some herbaria, apparently due to a typographic or stenographic error, as *L. "macrophylla"* Cham. On the other hand, the Harley 18603, 18929, & 19011, distributed as *L. microphylla*, actually are *L. schomburgkiana* Schau.

Additional citations: GUYANA: Maas & Westra 3634 (Ld). BRAZIL: Bahia: Mori & Funch 13367 (N, Z); Mori, Mattos Silva, Kallunki, Santos, & Santos 9696 (Ld, N). Goias: Hatschbach 40090 (W--2850777).

#### *LIPPIA MODESTA* Briq.

Additional bibliography: Mold., Phytologia 39: 179--180. 1978; Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 272, 277, & 278, fig. 131. 1979; Mold., Phytol. Mem. 2: 178, 180, 189, & 561. 1980.

Additional illustrations: Troncoso in Burkart, Fl. Ilust. Entre Ríos 5: 277, fig. 131. 1979.

Troncoso (1979) cites only Burkart 24013 and Pedersen 6306 from Entre Ríos, Argentina, giving the overall distribution of the species as Paraguay and northern Argentina, but "poco común en la provincia" [Entre Ríos].

#### *LIPPIA MORII* Mold., Phytologia 45: 36--37. 1980.

Bibliography: Mold., Phytologia 45: 36--37. 1980; Mold., Phytol. Mem. 2: 148 & 561. 1980.

Recent collectors describe this plant as a shrub, 2 m. tall, and have encountered it on campo rupestre, at 1000--1200 m. altitude, flowering in March. The corollas are said to have been "white" on Mori & Benton 13500.

Citations: BRAZIL: Bahia: Mori & Benton 13500 (N, Z); Mori, King, Santos, & Hage 12387 (W--2854264--isotype, Z--isotype).

#### *LIPPIA MORONGII* Kuntze

Additional bibliography: Mold., Phytologia 39: 180 (1978) and 40: 78 & 79. 1978; Mold., Phytol. Mem. 2: 148, 178, 180, 189, & 561. 1980.

#### *LIPPIA MULTIFLORA* Mold.

Additional bibliography: Noamesi, West Afr. Journ. Pharmacol.

Drug Res. 4: 33--36. 1977; Wickens, Kew Bull. Addit. Ser. 5: 309, map 151. 1977; Mold., Phytologia 41: 146. 1979; Noamesi, Biol. Abstr. 67: 6243. 1979; Mold., Phytol. Mem. 2: 200, 201, 205, 207, 208, 210, 211, 213--217, 220, 357, & 561. 1980.

*LIPPIA MYRIOCEPHALA* Schlecht. & Cham.

Additional bibliography: Schlecht. & Cham., Linnaea 6: 372. 1831; Anon., Biol. Abstr. 68: 3939. 1979; Hocking, Excerpt. Bot. A.33: 87 & 88. 1979; Mold., Phytologia 41: 146--147. 1979; Mold., Phytol. Mem. 2: 64, 72, 76, 78, 79, 81, 419, 421, & 561. 1980.

Recent collectors describe this plant as a tree, 3 m. tall, report the vernacular name, "htzinte", and have found it in wet soil, and full anthesis in January, February, September, October, and December, and in fruit in February and October, growing at 4100--2600 m. altitude. Schlechtendal & Chamisso (1831) describe the plant as a tree with white "flowers" [corollas]. They note that "Speciminibus Jalapensis paulo nagi pubescens, foliis caputilis paulo minoribus, caeterum haud diversa". I regard these more pubescent plants as var. *hypoleia* (Briq.) Mold.

The Acosta & Dorantes 533, Dorantes & Acosta 1804, and Lent 1783, distributed as typical *L. myriocephala*, actually represent var. *hypoleia* (Briq.) Mold.

Additional citations: MEXICO: Chiapas: Miranda 7062 (Me--73569. Veracruz: Miranda 750 [DC.43024] (Me--73564); Sharp 44812 (Me--168751); Sousa 2559 [DC.43020] (Me--112552), 2849 [DC.43019] (Me--112587). Yucatán: Enriquez 259 (Me--128201).

*LIPPIA MYRIOCEPHALA* var. *HYPOLEIA* (Briq.) Mold.

Additional bibliography: Schlecht. & Cham., Linnaea 6: 372. 1831; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytologia 41: 147. 1979; Mold., Phytol. Mem. 2: 65, 72, 74, 76, 78, 79, 81, 376, 420, 421, & 561. 1980.

Recent collectors describe this plant as a common shrub or tree, 6--15 m. tall, and have encountered it in pastures, along roadsides, in evergreen forests on steep slopes, in open meadows, at the edges of disturbed evergreen forests on hillsides, along small streams, in deciduous forests, and "in acahual of 2 years of *Helicteres guazumaeifolia*, *Terminalia amazonia*, and *Waltheria brevipes*", at 400--1500 m. altitudes, flowering in January and from September to November, and fruiting in October and November. The corollas are said to have been "greenish" on Acosta & Dorantes 533 and Dorantes & Acosta 1804, "white" on Stevens 5819 & 6089 "very pale-yellow" on Vincelli 46, and "light-cream to yellow" on Lent 1783.

Additional citations: MEXICO: Veracruz: Acosta & Dorantes 533 (Ld); Dorantes & Acosta 1804 (Ld); Gonzalez Leija & Garza 8087 (Me--139741); Miranda 4872 [DO.43023] (Me--85319, Me--85320); Vazquez T.32 (N), 65 (N). GUATEMALA: Baja Veracruz: Williams, Molina R., Williams, & Molina 40683 (W--2862462). NICARAGUA: Chontales: W. D. Stevens 6089 (Ld); Vincelli 46 (Ld). Managua: W. D. Stevens 5819 (Ld). COSTA RICA: Cartago: Lent 1783 (Go).

*LIPPIA MYRIOCEPHALA* var. *INTEGRIFOLIA* Loes.

Additional bibliography: Mold., Phytologia 39: 252, 253, & 258. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 72, 76, 78, & 561. 1980.

*LIPPIA MYRIOCEPHALA* var. *OVATIFOLIA* (Mold.) Mold.

Additional bibliography: Mold., Phytologia 39: 258. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 65, 72, 420, & 561. 1980.

*LIPPIA NANA* Schau.

Additional bibliography: Mold., Phytologia 39: 258--259 & 444. 1978; Mold., Phytol. Mem. 2: 148 & 561. 1980.

*LIPPIA NEPETACEA* Schau.

Additional bibliography: Mold., Phytologia 39: 259 & 438. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 148, 421, & 561. 1980.

*LIPPIA NIGERIENSIS* Mold.

Additional bibliography: Mold., Phytologia 39: 259. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 211, 213, 234, & 561. 1980.

*LIPPIA OATESII* Rolfe

Additional bibliography: Mold., Phytologia 39: 259--260 & 394. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 234, 236, 238, & 561. 1980.

*LIPPIA OAXACANA* Robinson & Greenm.

Additional bibliography: Mold., Phytologia 39: 260. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 65 & 561. 1980; Mold., Phytologia 48: 165. 1981.

Recent collectors describe this species as a shrub, about 1 m. tall, and have found it growing along ravines and on "ladera caliza" in "selva baja caducifolia", flowering in August and October, fruiting in August. The corollas are described as "lobes white, tube dark-yellow" on Lundell & Lundell 12507. This collection was distributed as and previously incorrectly cited by me as *L. chrysanthia* Greenm.

Additional & emended citations: MEXICO: Guerrero: Blanco, Toledo, & Cabrera 583 (Me--276273), Morelos: Lundell & Lundell 12507 (Ld, Ld, Mi, N).

*LIPPIA OBOVATA* Sessé & Moc.

Additional bibliography: Mold., Phytologia 39: 260. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytol. Mem. 2: 65 & 561. 1980.

*LIPPIA OBSCURA* Briq.

Additional bibliography: Mold., Phytologia 39: 260--261 (1978) and 40: 82. 1978; Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phy-

tol. Mem. 2: 148, 178, & 561. 1980.

Additional citations: BRAZIL: Mato Grosso: Kirkbride & Lleras 3044 (N).

*LIPPIA ORIGANOIDES* H.B.K.

Emended synonymy: *Lippia origanoides* Humb. & Bonpl. apud Steud., Nom. Bot. Phan., ed. 1, 486. 1821.

Additional bibliography: Steud., Nom. Bot. Phan., ed. 1, 486 (1821) and ed. 2, 1: 664 (1840), and ed. 2, 2: 54. 1841; Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 602. 1927; Anon., Biol. Abstr. 68: 3939. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 28. 1979; Mold., Phytologia 41: 147--148 & 151. 1979; Mold., Phytol. Mem. 2: 105, 109, 116, 148, 357, 415, 421, & 561. 1980.

Knuth (1927) reduces *L. elegans* Cham. to synonymy here and cites from Venezuela the following collections: Bermudez: *Humboldt & Bonpland s.n.* Distrito Federal: Otto, 456, Pittier 8096 & 9671. Miranda: Pittier 8251. Zulia: Pittier s.n. He reports the vernacular name, "orégano".

Recent collectors refer to this plant as a shrub, about 2 m. tall, the leaves aromatic, used for flavoring meat and fish dishes, and have found it cultivated in cleared areas near dwellings in Vaupés, Colombia, and on steep rocky slopes with a great variety of trees, at sealevel to 50 m. altitude, flowering and fruiting in June, also in anthesis in September. The corollas are said to have been "white" on Steyermark & al. 108064.

Additional citations: VENEZUELA: Sucre: Steyermark, Espinosa, & Manara 108064 (N), 108193 (N). Los Venados Island: Steyermark, Espinosa, & Manara 108078 (L). CULTIVATED: Colombia: Zarucchi 1315 (Id). Venezuela: Tamayo 4147 (N).

*LIPPIA OXYCNEMIS* Schau.

Additional bibliography: Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytologia 41: 148. 1979; Mold., Phytol. Mem. 2: 149 & 561. 1980.

Recent collectors describe this plant as a coarse herb, about 1.8 m. tall, the involucral bracts red-purple, and have found it growing in meadows, at 1000 m. altitude, flowering in April. The corollas are said to have been "pale-lavender with [a] red-violet nectar-guide in the throat" on the collection cited below.

Additional citations: BRAZIL: Distrito Federal: Plowman 10002 (N).

*LIPPIA OXYPHYLLARIA* (Donn. Sm.) Standl.

Additional bibliography: Anon., Biol. Abstr. 68: 3939. 1979; Mold., Phytologia 41: 148. 1979; Mold., Phytol. Mem. 2: 76, 81, 84, 421, & 561. 1980.

*LIPPIA PALMERI* S. Wats.

Additional synonymy: *Lippia palmeri* var. *palmeria* Spellenb., ex Mold., Phytol. Mem. 2: 421, in syn. 1980.

[to be continued]